

KICK-OFF MEETING OF ECNIS NETWORK OF EXCELLENCE

WARSZAWA, POLAND, 23–26 MAY 2005

The many-months efforts of the staff involved in the preparatory activities for the ECNIS project were rewarded with the official launching of the Environmental Cancer Risk, Nutrition and Individual Susceptibility Network of Excellence (ECNIS NoE), coordinated by the Nofer Institute, at the kick-off meeting in Warszawa on 25–26 May 2005.

The ultimate goal of ECNIS NoE is to establish an internationally competitive network of European research centers to overcome the existing fragmentation of activities and to enhance the quality and relevance of research on environment, nutrition, and cancer risk as modulated by diet and genetic disposition. By bringing together researchers with expertise in different branches (e.g., epidemiology, chemical analysis, genetics, molecular biology, nutrition, exposure assessment, risk assessment, harmonization of methodologies and analytical techniques), who will identify the information gaps and forward suggestions for improvement of existing techniques, a dynamic European consortium has been created to act in the area of environmental cancer risk, nutrition and individual susceptibility. ECNIS NoE will not only conduct research activities based on common biobanks and human resources, but will also provide support to regulatory bodies, industry and the general public. The main focus of this virtual research center of excellence will be on the use of biomarkers of exposure and bioindicators of disease in molecular epidemiology of cancer with the ultimate goal to reduce the cancer burden in Europe. Support for the development of functional foods constitutes a potential important spin-off from this NoE.

The overall objectives of ECNIS are:

- 1) to overcome in Europe the fragmented nature of research in areas related to carcinogenesis caused by diet, the environment, occupation or lifestyle;
- 2) to integrate joint training and mobility programs regarding molecular epidemiology of environmental cancer;
- 3) to develop and validate novel biomarkers of exposure, effect and susceptibility for environmental and occupational cancer risk assessment;
- 4) to identify factors which modulate the environmental and occupational cancer risk resulting from nutrition and lifestyle factors;
- 5) to develop hazard and risk assessment strategies based on the mechanism of action of the carcinogens;
- 6) to disseminate the acquired knowledge to the scientific community;
- 7) to disseminate the acquired knowledge to external stakeholders;
- 8) to provide management structure for coordinating the network activities.

Many of ECNIS activities will be open to external participation; for example, the ECNIS training courses, and the Network may expand and incorporate new members during its lifetime. It is hoped that after the five years of its activity as scheduled, the ECNIS NoE will have become a permanent, self-standing structure. Although based in Europe, the Network will extend its activities beyond Europe via international contacts.

Professor Konrad Rydzyński, Director General of the Nofer Institute and the Coordinator of the ECNIS Network welcomed all the participants and invited guests and made a presentation on the origin, objectives, and structure of the Network. This introductory lecture was followed by



Opening of the meeting on the Community-Sponsored Research on Environmental Cancer Risks and Regulation. Dr Tuomo Karjalainen, Scientific Officer, European Commission, Directorate E (Biotechnology, Agriculture and Food Research), Unit E-2 (Food Quality) (pictured left) and prof. Konrad Rydyński, Director of the Nofer Institute of Occupational Medicine, Łódź, Poland (pictured right).

a series of consecutive ECNIS workpackage meetings to set out specific plans for future network activities.

As a result of an open competition, 24 partners from 13 European countries have been invited to participate in the ECNIS Network of Excellence, the largest international project coordinated by a Polish research center. The Eu-

ropean Commission granted eleven million euro for the implementation of this strategic task during the five years to follow. Of 189 researchers representing the centers that have contributed to establishing the ECNIS Network of Excellence 120 were hosted at the meeting in Warszawa.

In the ECNIS Network of Excellence participate: Nofer Institute of Occupational Medicine, Łódź, Poland – coordinator

- German Cancer Research Centre (DKFZ), Heidelberg, Germany
- University of Copenhagen (UC), Copenhagen, Denmark
- Karolinska Institute (KI), Stockholm, Sweden
- Institute for Scientific Interchange Foundation (ISI), Turin, Italy
- The National Hellenic Research Foundation (NHRF), Athens, Greece,
- University of Leicester (ULEIC), Leicester, United Kingdom
- József Fodor National Center for Public Health (FJOKK), Budapest, Hungary
- Nicolaus Copernicus University, Collegium Medicum, Bydgoszcz, Poland
- Genetics Research Institute and Ospedale Policlinico (GRI), Milan, Italy
- University of Mainz (JOGU), Mainz, Germany
- Finnish Institute of Occupational Health (FIOH), Helsinki, Finlande
- Free University of Brussels (VUB), Brussels, Belgium
- University of Lund (ULUND), Lund, Sweden
- University of Leuven, Leuven, Belgium
- Institute of Cancer Research (ICR), London, United Kingdom
- University of Maastricht (UM), Maastricht, The Netherlands
- Biochemical Institute for Environmental Carcinogens. Prof. Gernot Grimmer Foundation (BIU), Grosshansdorf, Germany
- Catalan Institute of Oncology (ICO), Barcelona, Spain
- Utrecht University, Institute for Risk Assessment Science (IRAS-UU), Utrecht, The Netherlands



The geographic distribution of the countries participating in the kick-off meeting of ECNIS.

- University of Dundee (UNIVDUN), Dundee, United Kingdom
- International Agency for Research on Cancer (IARC), Lyon, France
- NETIX Skrzypczyński, Krzysztofowicz Sp. J. (NETRIX Sp. J.), Warszawa, Poland
- Leocordia AB (Leokordia), Stallarholmen, Sweden.

During the first part of the Warszawa meeting, the research on cancer carried out under the 5th and 6th Framework Programs of Research and Technical Devel-

opment of the European Union, 2002–2004 was evaluated at the Workshop on Community-Sponsored Research on Environmental Cancer Risks and Regulation. The Nofer Institute may pride itself on arranging the first international forum for the exchange of knowledge and ideas that facilitated a comprehensive evaluation of the research performed to date with an insightful analysis of results.

The lists of projects (FP5 and FP6) are presented in Tables 1 and 2.

Table 1. Cancer-related projects within FP5 (1998–2002)

Contract number, acronym	Title	Status
Air pollution and cancer		
QLK4-CT-1999-00927 GEN-AIR	Molecular changes and genetic susceptibility in relation to air pollution and environmental tobacco smoke	Finished
QLK4-CT-2000-00091 EXPAH	Effects of PAHs in environmental pollution on exogenous and endogenous DNA damage	Finished
QLK4-CT-2002-02402 AMBIPA	Mechanism-based approaches to improved cancer risk assessment of ambient air polycyclic aromatic hydrocarbons	Ongoing
Chemicals and cancer		
QLK4-CT-1999-01142 ASRISK	The mechanistic basis for providing a realistic cancer risk assessment for exposure to inorganic arsenic within the European community	Finished
QLK4-CT-2001-00264 ASHRAM	Arsenic health risk assessment and molecular epidemiology	Finished
QLK4-CT-2000-00286 OXEXRISK	Oxidative stress and chronic diseases: Exocyclic DNA adducts as markers for disrupted genomic integrity and risk	Finished
QLK4-CT-1999-01629 FIBRETOX	Mechanisms of toxicity of asbestos substitute mineral fibres: New approaches to hazard and risk assessment	Finished
QLK4-CT-2000-00573 WOOD-RISK	Risk assessment of wood dust: Assessment of exposure, health effects and biological mechanisms	Finished
QLK4-CT-2001-00211 EUROPIT	Toxicological evaluation of the immune function of pesticide workers	Finished
QLK4-CT-2000-00058 PEPFAC	Protection of the European population from aneugenic chemicals	Finished
QLK4-CT-2000-00422 EPILYMPH	Environmental exposures and lymphoid neoplasms	Finished
QLK4-CT-2001-02198 CHILDRENGENONETWORK	European network on children's susceptibility and exposure to environmental genotoxicants	Ongoing
QLK4-CT-2000-00628 CANCER RISK BIOMARKERS	Cytogenetic biomarkers and human cancer risk	Finished
Endocrine disruption and cancer		
QLK4-CT-CT-1999-01422 ENVIR. REPROD. HEALTH	Increasing incidence of human male reproductive health disorders in relation to environmental effects on growth- and sex steroid-induced alterations in programmed development	Ongoing
QLK4-CT-2001-00269 EXPORED	Exposure-outcome relationship in male urogenital malformations with special reference to endocrine disrupters	Ongoing
QLK4-CT-2002-02403 GENDISRUPT	Genetic markers and susceptibility to the effects of endocrine disruptors during mammalian testis development	Ongoing
QLK4-CT-1999-01446 DIOXIN RISK ASSESSMENT	Comprehensive risk analysis of dioxins: Development of methodology to assess genetic susceptibility to developmental disturbances and cancer	Finished

QLK4-CT-2000-00488 PCBRISK	Evaluating human health risk from low-dose and long-term PCB exposure	Finished
QLK4-CT-2001-00596 FIRE	Risk assessment of brominated flame retardants as suspected endocrine disrupters for human and wildlife health	Ongoing
QLK4-CT-2001-00603 EDEN	Exploring novel endpoints, exposure, low-dose- and mixture-effects in humans, aquatic wildlife and laboratory animals	Ongoing
Non-ionising electromagnetic radiation and other types of radiation		
QLK4-CT-1999-01574 REFLEX	Risk evaluation of potential environmental hazards from low-energy electromagnetic field (EMF) exposure using sensitive <i>in vitro</i> methods	Finished
QLK4-CT-1999-01563 INTERPHONE	International case-control studies of cancer in relation to mobile telephone use	Finished
QLK4-CT-1999-01214 ADVICE PULSED FIELDS	Development of advice to the EC on the risk to health of the general public from the use of security and similar devices employing pulsed electromagnetic fields	Finished
QLK4-CT-2000-00129 THz-BRIDGE	Tera-hertz radiation in biological research. Investigations on diagnostics and study on potential genotoxic effects	Finished
QLK4-CT-2001-00463 RAMP 2001	Risk assessment for exposure of nervous system cells to mobile telephone EMF: From <i>in vitro</i> to <i>in vivo</i> studies	Ongoing
QLK4-CT-1999-01476 PERFORM-A	<i>In vivo</i> research on possible health effects related to mobile telephones and base stations (Carcinogenicity studies in rodents)	Ongoing
QLK4-CT-1999-01129 CEMFEC	Combined effects of electromagnetic fields with environmental carcinogens	Ongoing
QLK4-CT-2000-00444 THYR-RISK	Environmental and host factors in the risk of thyroid cancer (concerted action)	Finished
Others		
QLK4-CT-1999-01084 MAUVE	Genetic mechanisms involving ultraviolet light in the development of malignant cutaneous melanoma	Finished
QLK4-CT-2001-00147 NANO PATHOLOGY	The role of nano-particles in material-induced pathologies	Finished
More information from http://dbs.cordis.lu/search/en/simple/EN_ACRO_simple.html or from KA4 catalogue (ftp://ftp.cordis.lu/pub/life/docs/keyaction4.pdf)		

Table 2. Cancer-related projects within FP6 (2002–2006)

Contract number, acronym	Title	Status
SSP-CT-2004-502671 ENVIE	Co-ordination action on indoor air quality and health effects	Ongoing
SSP-CT-2004-513953 EMF-NET	Effects of exposure to electromagnetic fields: From science to public health and safer workplace	Ongoing
FOOD-CT-2004-506319 CASCADE	Chemicals as contaminants in the food chain: NoE for research, risk assessment, education, and information	Ongoing
FOOD-CT-2004-506360 NUGO	European Nutrigenomics Organisation - linking genomics, nutrition and health research	Ongoing
FOOD-CT-2004-506359 SEAFOODPLUS	Health promoting, safe seafood of high eating quality in a consumer driven fork-to-farm concept	Ongoing
FOOD-CT-2005-513943 ECNIS	Environmental cancer risk, nutrition and individual susceptibility	Ongoing
More details from http://europa.eu.int/comm/research/fp6/ssp/themes_en.htm#203 and http://www.cordis.lu/fp6/projects.htm .		

The time was ripe for organizing a workshop on cancer-related projects for two principal reasons. Firstly, a number of cancer-related projects sponsored by the European Commission were coming to an end or have recently ended. This was the first time that the Commission brought

together such a large number of scientific communities working on different environmental stressors related to cancer with a view to discuss the results in time for the next framework program for research (2007–2013). Secondly, building on this previous work, the ECNIS Network of Ex-

cellence was launched. Its activities will cover populations from different regions of Europe with different climates, pollution levels and dietary habits. This will allow for the assessment of exposure-response relationships over a wide range of environmental scenarios, so as to enable population studies at a scale that is not possible under the present conditions of research fragmentation.

Despite considerable efforts in cancer diagnostics and treatment, the number of cancer-related deaths continues to increase all over the world, including the EU. For example, cancer rates in children in Europe have increased by one percent/year since 1970.

Several major assessments have implicated smoking, inappropriate dietary habits, sunbathing and alcohol abuse as the main avoidable causes of cancer in the general population. In a broad sense, environmental factors related to occupation and lifestyle are responsible for the vast majority of human cancers, both via genotoxic and epigenetic mechanisms as well as via modulation of the carcinogenic events. Even a slight decrease in the number of such cancers in the general population would translate into a huge reduction in the social and economical expenditures within EU.

Substantial evidence indicates that the risk resulting from exposure to carcinogens can vary considerably with the life stage of the individual at which exposure takes place. In particular, exposure at early life stages (including the pre-natal stage) may play an important role in modulating cancer risk. In addition, currently available evidence strongly implies that genetic variation in humans may significantly modify individual response to carcinogenic exposures.

Invited guests

To enhance the rank and prestige of the event, the Nofer Institute of Occupational Medicine addressed invitations to participate in the Workshop to a large number of outstanding representatives of the political and scientific circles who have expressed their interest in the event.

Support for our initiative, through their attendance at the conference, was shown by Prof. Michał Kleiber, Minister of Science and Information Technology, Prof. Roman Danilewicz and Dr. Przemysław Kłaman of the Ministry of



Prof. Michał Kleiber, Minister of Science and Information Technology (pictured) giving an opening address.

Health, Dr. Jacek Jaśkiewicz of the Ministry of the Environment, Dr. Andrzej Siemaszko of the National Contact Point, Prof. Lucjan Szponar, Director of the Food and Nutrition Institute, and Prof. Krzysztof Szyfter, President of the European Environmental Mutagens Society. Among the invited guests there were also high officers of the European Commission from Brussels and heads of research projects supported by the European Union. Professor Jerzy Buzek, former Polish Prime Minister and present Deputy of European Parliament honoured the conference with his presence and shared his own observations made



Prof. Jerzy Buzek (pictured) giving an opening address.

during the European Commission debates. He stressed the lack of information exchange between research centers, which diminishes the efficacy of their work.

Dr. Marek Balicki, Minister of Health who was not able to attend the conference sent his address, in which he expressed the words of hope that the concerted efforts of researchers acting within the ECNIS Network of Excellence will bring forth tangible effects for better worldwide control of neoplastic diseases.

Off the record...

The Workshop ended with a picnic organized in the old Polish style in Firleje near Warszawa. There, the work-

shop participants had fun listening to folk music played by "Swoja Droga" and tasting traditional Polish dishes offered on tables laden with food.

Summing-up of the kick-off meeting

The gathering of the persons engaged in the implementation of the ECNIS concept proved to be not only the forum for setting organizational and subject matters, but also an occasion for new contacts, which will most likely bear manifold fruits in the near future.

"...We are very much impressed by the high organizational and scientific standard of the conference as well as satisfied with a unique atmosphere that accompanied the workshop", said Minna Wilkki, ECNIS Project Officer of the European Commission, DG Research.

Professor Rydzyński, the Coordinator of the ECNIS Network, wished everybody success in achieving the Network goals and gave each participant a horseshoe, with an inscription "ECNIS" carved on it, as a good luck charm.

dr Maciej Stepnik

Executive Director of the ECNIS Management Office

Katarzyna Kaźmierczak

Section of Scientific Research Planning



"Swoja Droga" plays folk music at the picnic in Firleje near Warszawa.